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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHERY, DADY

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

09/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/625,578	Applicant(s) JUN ET AL.	
	Examiner Dady Chery	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 25 July 0207.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 11-13 and 18-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. This communication is responsive to the amendment filed on 01/18/2007.

***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 10 and 14 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Skahan Jr. et al. (US Patent 7,139,346, hereinafter Skahan) in the view of Gilkes (US Patent 6,768,452, hereinafter Gilkes).

Regarding claim 1. Skahan discloses a *network synchronization system comprising (Fig. 1):*

*an NTP (Network Time Protocol) server (30) for providing time synchronization to a plurality of node units in the network (18), The terrestrial network (18) has a plurality of nodes (Col. 3, lines 21 –40).*

Skahan discloses an NTP server (50) communicating with mobile network that includes mobile terminal (14). A NTP server (30) that receives a time reference from a master clock (30), the mobile terminal communicates its time to the NTP server via the

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network (Col. 3, lines 32 –36). But he does not expressly mention that the synchronous mobile terminal.

However, Gilkes teaches a CDMA device that has been use as a synchronizing element (Fig.9a and Col. 16, lines 1 -20).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mobile as external time source for synchronizing for querying the timeserver for the current time (Abstract).

Regarding claim 2, Skahan discloses all the limitations of claim 2, except *the network includes an Intranet*.

However, Gilkes teaches *the network includes an Intranet* (Col8, lines 1- 5).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gilkes into the teaching of Skahan for the purpose of synchronizing for querying the timeserver for the current time (Abstract).

Regarding Claim 3, Skahan discloses all the limitations of claim 3, except *the wireless interface includes a Bluetooth interface*

Gilkes teaches *the wireless interface includes a Bluetooth interface* (Col. 7, lines 25 –29).

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Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gilkes into the teaching of Skahan for the purpose of synchronizing for querying the timeserver for the current time (Abstract).

Regarding claim 4, Skahan discloses all the limitations of claim 4, except *the synchronous mobile terminal includes an IS-95/2000 mobile terminal*

However, Gilkes teaches *the synchronous mobile terminal includes an IS-95/2000 mobile terminal* (Col. 16, lines 10 – 14). A CDMA device is an IS-95/2000 mobile terminal.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gilkes into the teaching of Skahan for the purpose of synchronizing for querying the timeserver for the current time (Abstract).

Regarding claim 5, Skahan discloses all the limitations of claim 4, except *the NTP server includes an NTP stratum-1 server*

However, Gilkes teaches *the NTP server includes an NTP stratum-1 server* (Col. 8, lines 13 –15).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gilkes into the teaching of

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Skahan for the purpose of synchronizing for querying the timeserver for the current time (Abstract).

5. Claims 6, 7, 10 and 14- 17 and rejected under 35 U.S.C. 103(a) as being unpatentable over Skahan in the view of Gilkes and in further view of Potash et al. (US Patent 4,893,318).

Regarding claim 6, Skahan discloses the NTP server comprises:

*an NTP processor for providing time synchronization to the plural node units requesting time synchronization*(Col. 12, lines 30 – 40) ; The NTP server provides response to request of time by the client. Furthermore, a server is a computer a processor is inherent feature of a computer.

Skahan discloses a clock because in order for the NTP server the time it must have a clock (30). But, Gilkes does not expressly mention a *virtual clock manager being in communication with the mobile terminal through the wireless interface and managing the mobile terminal as a virtual reference clock*.

However, Potash teaches a virtual clock manager clock that being in communication with a slave clock and sets the slave clock as a virtual reference as described by the instant application (Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the master clock as a virtual clock for managing the

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slave clock for synchronizing multiple node to a common time reference (Col. 2, lines 31 –35).

Regarding claim 7, Skahan discloses:

*an NTP message processor for analyzing an NTP packet request message received from the NTP processor, reformatting time information acquired from the mobile terminal into an NTP packet format, and sending the NTP packet format as a response message to an NTP packet processor;* Gilkes discloses a NTP server and communication processor which performs any and all necessary translation including time into packet format (Col. 3 lines 21 – Col. 4, lines 30).

*an interface including a wireless network protocol, and communicating with the mobile terminal.* Gilkes discloses a wireless network protocol (Col. 1, lines 18 -25).

Skahan discloses the clock of the NTP server, but he does not mention a *clock manager for managing mobile terminals being present in the network area and operated as the reference clock of the NTP server*,

However, Potash teaches a virtual clock manager clock that being in communication with a slave clock and sets the slave clock as a virtual reference as described by the instant application (Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the master clock as a virtual clock for managing the



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slave clock for synchronizing multiple node to a common time reference (Col. 2, lines 31 –35).

Regarding claim 10, Skahan discloses *a network synchronization method (Fig. 1), which is for synchronizing a network that includes an NTP server (50) using a mobile network (14) as an external reference clock, the network synchronization.* The terrestrial network (18) has a plurality of nodes (Col. 3, lines 21 –40).

Gilkes discloses:

*(a) the synchronous mobile terminal with a wireless interface getting a connection to the network;* The mobile terminal (905) has a wireless interface for communicating with the wireless network (910) (Col. 16, lines 11-13).

*(b) the NTP server registering the network-connected synchronous mobile terminal as a virtual reference clock;* When the mobile access the NTP server via the network. The NTP server registered its clock as a reference clock (Col. 16, lines 1 – 20).

*(c) the NTP server receiving a time synchronization request message from a plurality of node units in the network;* The NTP client transmit request receive from multiple node in the network to NTP server ( Col. 12 , lines 25 – 30).

Skahan in combination of Gilkes does not expressly mention the *NTP server setting the registered mobile terminal as the virtual reference clock and acquiring time synchronization of the node units requesting time synchronization.*

However, Potash teaches a virtual clock manager clock that being in communication with a slave clock and sets the slave clock as a virtual reference as described by the instant application (Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the master clock as a virtual clock for managing the slave clock for synchronizing multiple node to a common time reference (Col. 2, lines 31–35).

Regarding claim 14, Skahan discloses *a network synchronization method (Fig. 1); which is for synchronizing a network that includes an NTP server (50) using a mobile network (14) as an external reference clock, the network synchronization. The terrestrial network (18) has a plurality of nodes (Col. 3, lines 21–40).*

*an NTP processor for providing time synchronization to the plural node units requesting time synchronization(Fig. 1, 38,50) ;* The NTP server provides response to request of time by the client. Furthermore, a server is a computer a processor is inherent feature of a computer.

Gilkes discloses an NTP server communicating with a mobile terminal via a wireless network (Fig. 9a and 9b ).

But, Skahan in combination with Gilkes does not discloses *a virtual clock manager being in communication with the mobile terminal through the wireless interface and managing the mobile terminal as a virtual reference clock.*

However, Potash teaches a virtual clock manager clock that being in communication with a slave clock and sets the slave clock as a virtual reference as described by the instant application (Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the master clock as a virtual clock for managing the slave clock for synchronizing multiple node to a common time reference (Col. 2, lines 31 –35).

Regarding Claim 16, Skahan discloses all the limitations of claim 16, except *the wireless interface includes a Bluetooth interface*

Gilkes teaches *the wireless interface includes a Bluetooth interface* (Col. 7, lines 25 –29).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gilkes into the teaching of Skahan for the purpose of synchronizing for querying the timeserver for the current time (Abstract).

Regarding claim 16, Skahan discloses all the limitations of claim 16, except *the NTP server includes an NTP stratum-1 server*

However, Gilkes teaches *the NTP server includes an NTP stratum-1 server* (Col. 8, lines 13 –15).

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Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Gilkes into the teaching of Skahan for the purpose of synchronizing for querying the timeserver for the current time (Abstract).

Regarding claim 17, Skahan discloses:

*an NTP message processor for analyzing an NTP packet request message received from the NTP processor, reformatting time information acquired from the mobile terminal into an NTP packet format, and sending the NTP packet format as a response message to an NTP packet processor;* Gilkes discloses a NTP server and communication processor which performs any and all necessary translation including time into packet format (Col. 3, lines 21 –40).

Gilkes discloses *an interface including a wireless network protocol, and communicating with the mobile terminal.* Gilkes discloses a wireless network protocol (Col. 16, lines 1 20).

Skahan in combination with Gilkes discloses the clock of the NTP server , but they do not mention a clock manager for managing mobile terminals being present in the network area and operated as the reference clock of the NTP server;

However, Potash teaches a virtual clock manager clock that being in communication with a slave clock and sets the slave clock as a virtual reference as described by the instant application (Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the master clock as a virtual clock for managing the slave clock for synchronizing multiple node to a common time reference (Col. 2, lines 31-35).

***Allowable Subject Matter***

6. Claims 8, 9, 11, 12, 13, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dady Chery whose telephone number is 571-270-1207. The examiner can normally be reached on Monday - Thursday 8 am - 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dady Chery 09/25/2007

  
RICKY Q. NGO  
SUPERVISORY PATENT EXAMINER